



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE

United States Patent and Trademark Office

Address: COMMISSIONER FOR PATENTS

P.O. Box 1450

Alexandria, Virginia 22313-1450

www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/284,152	06/03/1999	MARK AARON EMALFARB	3123-4000US2	1956
27123	7590	03/18/2008		
MORGAN & FINNEGAN, L.L.P. 3 WORLD FINANCIAL CENTER NEW YORK, NY 10281-2101			EXAMINER FRONDA, CHRISTIAN L	
			ART UNIT	PAPER NUMBER
			1652	
			NOTIFICATION DATE	DELIVERY MODE
			03/18/2008	ELECTRONIC

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

PTOPatentCommunications@Morganfinnegan.com

Shopkins@Morganfinnegan.com

jmedina@Morganfinnegan.com

# Office Action Summary

**Application No.**

09/284,152

**Applicant(s)**

EMALFARB ET AL.

**Examiner**

CHRISTIAN L. FRONDA

**Art Unit**

1652

**-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --**  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 21 December 2007.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-109 is/are pending in the application.
- 4a) Of the above claim(s) 67-79 and 84-108 is/are withdrawn from consideration.
- 5) ☒ Claim(s) 1 is/are allowed.
- 6) ☒ Claim(s) 2-65, 80-83 and 109 is/are rejected.
- 7) ☒ Claim(s) 66 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO/SB/C)
- 4) ☐ Interview Summary (PTO-413)
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: \_\_\_\_\_
- Paper No(s)/Mail Date \_\_\_\_\_

Art Unit: 1652

### **DETAILED ACTION**

1. Claims 1-109 are pending in this application. Claims 67-79 and 84-108 have previously been withdrawn from consideration.
2. Claims 1-66, 80-83, and 109 are under consideration.
3. The rejection of claims 2-65 and 80-83 under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement has been withdrawn in view of applicants' arguments filed 12/21/2007.

#### ***Claim Rejections - 35 U.S.C. § 112, 2nd Paragraph***

4. The following is a quotation of the second paragraph of 35 U.S.C. 112:  
The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.
5. Claims 2-23 and 109 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.  
Claim 2 recites the phrase "isolating the composition having neutral and/or alkaline cellulose activity" which renders the claim vague and indefinite. The metes and bounds of the claims are uncertain since it is unclear how "compositions" can be obtained by the method as recited. Dependent claims 3-23 and 109 are also rejected because they do not correct the defect of claim 2.  
It appears the claim should recite "isolating a cellulose having neutral and/or alkaline cellulose activity". Amending the claims to recite growing the recited fungi in media and then isolating the cellulase for the claimed composition would help in overcoming the rejection.

#### ***Claim Rejections - 35 U.S.C. § 103***

6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

Art Unit: 1652

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

7. Claims 2-4, 6-65, 80-83 are rejected under 35 U.S.C. 103(a) as being unpatentable over Parslow et al. (US Patent 4,661,289; reference of record) in view of Janeckova et al. (Ceska Mykologic, (1977) Vol. 31, No. 4, pp. 206-213(abstract); reference of record). The reference teachings and rejection of record are reproduced below.

Parslow et al. teach compositions comprising fungal cellulase, surfactants, cationic fabric-softening compound, and builders (see entire US 4,661,289). Parslow et al. further teach that these compositions comprising fungal cellulase are useful for cleaning and softening natural and synthetic fibers (see entire US 4,661,289). Parslow et al. do not teach the claimed composition.

Janeckova et al. teach *Chrysosporium lucknowense* isolated from soil (see Abstract). Bukhtojarov et al. provide evidence that *Chrysosporium lucknowense* contains cellulolytic enzymes including endoglucanases, cellobiohydrolases, and cellulases that have neutral and/or alkaline cellulose activity, specifically EG24 and EG47(see Abstract).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the teachings of Parslow et al. such that the *Chrysosporium lucknowense* cellulolytic enzymes including endoglucanases, cellobiohydrolases, and cellulases that have neutral and/or alkaline cellulose activity are substituted for or added into the compositions taught by Parslow et al. One of ordinary skill in the art at the time the invention was made would have been motivated to do this because Parslow et al. teach that compositions comprising fungal cellulases are useful for cleaning and softening natural and synthetic fibers and that neutral/alkaline cellulases have the advantage of better wash performance within a wider pH range.

It would have been obvious to one of ordinary skill in the art at the time the invention was made to mutate the selected fungus by methods well known in the art such as treatment of fungus with UV irradiation, chemical mutagens such as nitrous acid, and site-directed mutagenesis; and select mutant fungus strains with the desired property such as increased or neutral/alkaline cellulase activity by assaying and screening for mutants having the desired property. Furthermore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to dilute or concentrate the *Chrysosporium lucknowense* cellulolytic enzymes including endoglucanases, cellobiohydrolases, and cellulases that have neutral and/or alkaline cellulose activity to either 964, 191, or 124 units of cellulase activity per gram of dry composition in order to optimize for cleaning and softening natural and synthetic fibers. Thus, the claimed invention was within the ordinary skill in the art to make and use at the time was made, and was as a whole clearly *prima facie* obvious.

The arguments filed 12/21/2007 have been fully considered but are not persuasive. It must be recognized that any judgment on obviousness is in a sense necessarily a reconstruction based upon hindsight reasoning. But so long as it takes into account only knowledge which was

Art Unit: 1652

within the level of ordinary skill at the time the claimed invention was made, and does not include knowledge gleaned only from the applicant's disclosure, such a reconstruction is proper. See *In re McLaughlin*, 443 F.2d 1392, 170 USPQ 209 (CCPA 1971). Obviousness can be established by combining or modifying the teachings of the prior art to produce the claimed invention where there is some teaching, suggestion, or motivation to do so found either in the references themselves or in the knowledge generally available to one of ordinary skill in the art. See *In re Fine*, 837 F.2d 1071, 5 USPQ2d 1596 (Fed. Cir. 1988) and *In re Jones*, 958 F.2d 347, 21 USPQ2d 1941 (Fed. Cir. 1992).

MPEP 2143 states other rationales that support a conclusion of obviousness:

"Exemplary rationales that may support a conclusion of obviousness include:

(A) Combining prior art elements according to known methods to yield predictable results;

(B) Simple substitution of one known element for another to obtain predictable results;

(C) Use of known technique to improve similar devices (methods, or products) in the same way;

(D) Applying a known technique to a known device (method, or product) ready for improvement to yield predictable results;

(E) "Obvious to try" – choosing from a finite number of identified, predictable solutions, with a reasonable expectation of success;

(F) Known work in one field of endeavor may prompt variations of it for use in either the same field or a different one based on design incentives or other market forces if the variations are predictable to one of ordinary skill in the art;

(G) Some teaching, suggestion, or motivation in the prior art that would have led one of ordinary skill to modify the prior art reference or to combine prior art reference teachings to arrive at the claimed invention.

Note that the list of rationales provided is not intended to be an all-inclusive list. Other rationales to support a conclusion of obviousness may be relied upon by Office personnel."

Furthermore, according to MPEP 2112:

"The express, implicit, and inherent disclosures of a prior art reference may be relied upon in the rejection of claims under 35 U.S.C. 102 or 103. "The inherent teaching of a prior art reference, a question of fact, arises both in the context of anticipation and obviousness." *In re Napier*, 55 F.3d 610, 613, 34 USPQ2d 1782, 1784 (Fed. Cir. 1995) (affirmed a 35 U.S.C. 103 rejection based in part on inherent disclosure in one of the references). See also *In re Grasselli*, 713 F.2d 731, 739, 218 USPQ 769, 775 (Fed. Cir. 1983)."

"[T]he discovery of a previously unappreciated property of a prior art composition, or of a scientific explanation for the prior art's functioning, does not render the old composition patentably new to the discoverer." *Atlas Powder Co. v. Ireco Inc.*, 190 F.3d 1342, 1347, 51 USPQ2d 1943, 1947 (Fed. Cir. 1999). Thus the claiming of a new use, new function or unknown property which is inherently present in the prior art does not necessarily make the claim patentable. *In re Best*, 562 F.2d 1252, 1254, 195 USPQ 430, 433 (CCPA 1977). >*In re Crish*, 393

Art Unit: 1652

F.3d 1253, 1258, 73 USPQ2d 1364, 1368 (Fed. Cir. 2004), the court held that the claimed promoter sequence obtained by sequencing a prior art plasmid that was not previously sequenced was anticipated by the prior art plasmid which necessarily possessed the same DNA sequence as the claimed oligonucleotides. The court stated that "just as the discovery of properties of a known material does not make it novel, the identification and characterization of a prior art material also does not make it novel."

Therefore, in view of the above considerations, it would have been obvious to modify the teachings of Parslow et al. such that the compositions comprising fungal cellulose are substituted with the *Chrysosporium lucknowense* cellulolytic enzymes including endoglucanases, cellobiohydrolases, and cellulases that have neutral and/or alkaline cellulose activity taught by Janeckova et al., where simple substitution of one known element for another to obtain predictable results serves as rationale for supporting a conclusion of obviousness.

One of ordinary skill in the art at the time the invention was made would have been motivated to do this because Parslow et al. teach that compositions comprising fungal cellulases are useful for cleaning and softening natural and synthetic fibers and that neutral/alkaline cellulases have the advantage of better wash performance within a wider pH range. Thus, the claimed invention is *prima facie* obvious over Parslow et al. in view of Janeckova et al.

### Conclusion

8. Claim 1 is allowed.
9. Claim 66 is objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.
10. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.
11. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Christian L Fronda whose telephone number is (571)272 0929.

Art Unit: 1652

The examiner can normally be reached Monday-Thursday and alternate Fridays between 9:00AM - 5:00PM. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Nashaat Nashed can be reached on (571)272-0934. The fax phone number for the organization where this application or proceeding is assigned is (571)273-8300.

12. Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000. CLF

/Tekchand Saidha/

Primary Examiner, Art Unit 1652